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Improvement of the Race of Bees.

The principal queen breeders of Italy have addressed a communication to *L'Apicoltore*, the Italian bee paper published at Milan, Italy, in which they discuss the matter of queen rearing, and promise to profit by the addresses of our friend, Mons. Ed. Bertrand, editor of *L'Apiculteur*, published at Nyon, Switzerland, and the editor of the AMERICAN BEE JOURNAL. We extract the following paragraphs:

"The learned addresses of Messrs. Ed. Bertrand, of Switzerland, and Thomas G. Newman, of America, at the International Apicultural Congress last July, have had a wide publicity through the bee periodicals of Europe, and we desire to practice the recommendations made by these gentlemen at that Congress."

"We heartily endorse the recommendations of Mr. Thos. G. Newman, and assure him that we will give the rearing of queens for exportation to America and elsewhere the greatest of care, and as he advises, we will do all in our power to improve the race of bees, putting into practice the methods advised by our friend in America, but the illustrious ex-president of the North American Bee-Keepers' Society, and honorary member of so many subordinate societies on the other side of the Atlantic, should remember the great extra expense consequent upon an incessant and progressive selection, and we hope that he will be our advocate in America, and inform his countrymen that low prices and the best quality of merchandise are in our case absolutely incompatible."

The communication was signed by Signors Pietro Pilati, Lucio Paglia and Carlo Bianconcini, and indorsed most fully the recommendations and advice we offered to the Congress for the rearing of the best bees. We are fully aware that the last sentence, quoted above, is the key to the situa-

tion. To obtain something for nothing has been carried to such a length that it has threatened us with disaster. The very poor policy of getting cheap queens, at the expense of quality, has had its day, and now the sober-thinking and wise apiarists are setting their faces against such a dangerous policy.

If we expect to get a queen worth having from Italy, it is in vain to expect it at the price of \$3 or \$4, to which price they came down in our country last year.

This heap-by-cheap policy is ruinous when applied to any business, and should be discountenanced by bee-keepers generally, as too dangerous in its results to be practiced by them, and wholly incompatible with the idea of improving the race of bees. Who, but a lunatic, would think of buying a cheap Durham bull, or full blooded horse, or pig, for the purpose of breeding the best stock, horses or swine? and yet it would be just as reasonable as to buy an imported Italian queen for the same purpose for three or four dollars.

We can assure our Italian contemporary and the queen breeders of Italy, that a more reasonable era is dawning upon our people, and hereafter they will buy queens for their merits, and pay fair prices for them, instead of obtaining scrub stock at poverty-stricken prices. We only ask them to apply the most rigid rules of selection and progression, ask a fair price, and breed the best.

The bee-keepers of Philadelphia and vicinity have formed an Association, with Dr. Henry Townsend, President; C. H. Beeler, Jr., Vice President, and F. Hahman, Jr., Secretary. The object of the society is the "promotion of scientific bee-culture, by forming a strong bond of union among the bee-keepers."

A Sweet Meeting that Did Not Occur.

In the BEE JOURNAL for Feb. 1, 1882, we mentioned the fact that a Bee-Keepers' Convention appointed to be held at Berlin, Wis., could not be found by those who were looking for it. We said we knew nothing of the circumstances, but invited the Secretary to "arise and explain." The following explanation is received:

In regard to the meeting of the Northeastern Wisconsin Bee-Keepers' Society, I am the Secretary, and suppose I ought to explain. The Convention in Oshkosh, in Jan., 1881, in view of the small attendance and cold weather, decided to amend the by-laws and hold but one meeting a year, and that in October; but at the meeting in Pewaukee, this was forgotten, and I was prevented from attending, at the last moment, by the illness of my child. Had I been there, the mistake of appointing a meeting in January would not have been made. I wrote to the Secretary *pro tem*, telling him of the change, and asking him to see the different persons who were present, and get their permission to change the meeting to October, but received no answer from him till a few days before the time appointed for the Convention to take place, he having been very busy, and unable to devote the time to it, but said no one would be able to go from that part of the country, or not more than one person. It was too late to postpone the Convention then, and I did not know what to do, not feeling I had any authority in the matter, but I wrote to Mr. Chas. Green, of Berlin, from whom I had received a card a few days before, sending the card to him and telling him it would explain the matter. I send you leaf from my letter-copying book with the letter. Mr. Green has undoubtedly explained the matter to the bee-keepers in his vicinity, and I hope there is no harm done, and that the meeting will be held in October in Berlin, Wis.

My regret in the matter is sincere; it was simply impossible for me to leave home, so that I could not be there to explain it myself.

[As we expected, the matter was caused by a train of unavoidable circumstances. Let us hope that a little more care will be exercised, and that hereafter the "sweetness" supposed to be flowing around bee-conventions, may be so definitely located that the "busy bees" will all find it.

☞ It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

Incorporating Bee-Keepers' Societies.

Hon. L. Wallbridge, President of the Ontario Bee-Keepers' Society, has our thanks for calling attention to a typographical error in the BEE JOURNAL of Feb. 1st., page 68, where the depth of the Langstroth frame is erroneously given as 7½ inches; it should have read 9½ inches. The standard Langstroth frame is 9½x17½ inches, outside. Mr. Wallbridge adds:

I use this hive 12½ inches wide, with 9 frames 9½ inches deep. Bees *invariably* (a strong word) leave ½ of an inch between combs when they are allowed to choose their own distances. Should not this be the proper space between and at the ends of comb frames, and between the frames and honey boxes? I am now about to make my hives for next year, and wish to be accurate. You will confer a favor on others besides the writer, if you will give your views.

I would ask: Are the bee-keepers' associations in your State incorporated by legislative enactment, or are yours simply voluntary associations? The Ontario bee-keepers desire to be created an incorporation by law. Do you feel the want of being incorporated? I know there are inconveniences attending incorporation which I fear the Ontario bee-keepers do not see. I think we might dispense with it if you do.

After many years of observation and experimental study, three-eighths of an inch has been fixed upon with great unanimity, by experimental bee-keepers, as the proper bee-space. The difference between three-eighths and one-third of an inch is so very slight, however, that but little if any difference will be perceptible in the result.

Our bee-keepers' associations are all voluntary organizations, to join upon the payment of a light membership fee, and withdraw from at will. Holding no realty in common, and transacting no business requiring a seal or bonded officers, no necessity exists for, and no advantage would be gained by being incorporated. If it were intended to transact a general business requiring the acquisition or ownership of real or personal property, or other transactions whereby legal proceedings in law or equity might be resorted to, it would be necessary to file a declaration, take out a charter, and organize under the general law regulating incorporated bodies.

☞ We will send Cook's Manual bound in cloth, postpaid, and the Weekly BEE JOURNAL for one year, for \$3.00; or with King's Text-Book, in cloth, for \$2.75.

A Correction.—In the BEE JOURNAL for August 24, 1881, page 270, Mrs. A. M. Sanders gave her report—and about the middle of the letter this sentence occurred: "I had one chaff-hive, but that one did not *lose* a pint of bees; I like those hives," etc. By an oversight our printer thought the word *lose* was "have" (it looked much like it), and it was so set up and printed. As this completely changed the meaning of the sentence we learn that Mrs. Sanders felt aggrieved and wrote to the maker of that hive complaining of the matter, and intimating that it was purposely done, to injure it, etc. Her letter was a few days since forwarded to us for explanation and correction. We are sorry that the error was not observed and corrected *at once*—but must ask our correspondents NEVER to think for a moment that we intentionally change any idea. Sometimes it is very difficult to read a word and we often change the sentence to make it grammatical, but never knowingly change the idea. And we regret that any one should be ungenerous enough to intimate any such thing.

Horticulture and Bees.—The Fredonia, N. Y., *Censor*, of Jan. 26, 1882, speaking of the Horticultural Society's meeting at Brocton, says:

An "Improved Bee Feeder" was exhibited by the inventor, U. E. Dodge, of this village, which good judges pronounce of superior merit as it is certainly practical and cheap. Mr. Dodge also had specimens of evaporated apples in boxes with glass sides, which were very perfect.

The way to bring honey to public notice is to lose no opportunity of exhibiting honey, bees, apiarian implements, etc., at fairs and shows of all kinds. Persistent labor will always win. Keep the ball rolling.

☞ The *California Apiculturist*, is the name of a new bee paper published in Oakland, Cal. It contains 8 pages of the size of the BEE JOURNAL, and is to be published monthly at \$1 a year. It is edited by Mr. N. Levering, who is known to our readers as a practical bee-keeper, and it is published by the Apicultural Publishing Co. It is well filled with good reading matter, and we wish it success.

Recipe for Paste.—To make ordinary flour paste adhere well to tin or glass, add a small quantity of honey or brown sugar—say a tablespoonfull of honey to a pint of paste. Glue size is better than honey for pasting on wood.

WM. C. PELHAM.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Prepare for Spring Work.—Under this caption Wm. M. Kellogg writes thus to the *Prairie Farmer*:

Right now is the time to get ready our season's work in the apiary. By-and-by our bees will be coming out from their winter quarters, and we shall then be so busy attending to their wants that the little items, which have a vast bearing on the success or failure of the honey crop, will be neglected or entirely omitted. And say what we will about the pleasures of bee-keeping, the stubborn facts of the case are, that we are after the dollars and cents of the business, with very few exceptions, and they who expect to make a success of bee-keeping, to get large yields of honey, or increase in swarms, without attending to the little things of the business, need expect naught else but a failure in their efforts. Let us begin now to get our "house in order," these long winter evenings; let us spend a part of the time in discussing what we need to do to help our little pets when the time comes for them to work. Most of us have but little to do during the winter season, and the busiest ones can spare now and then a day to the bees.

Last fall, in the hurry of getting our honey ready for market and the bees packed away nice and snug for winter, many of our tools and fixtures were set to one side, tucked away into the handiest place at hand "for now," meaning to clean them up by-and-by. That by-and-by has come now; here go at it with a vim.

First, that pile of unfinished sections that we extracted the honey from last fall, and put away in a hurry, get them all together and with an old broken stub knife scrape off every bit of propolis, smooth and nice, so that they will go together like new ones without any bother. There, see what a nice lot of them we have, will not the bees fairly laugh to get at them? The mice have got at a few of them, we cut out their nibbling, unless soiled too much, if so, cut out all of it and replace with a good piece of comb foundation.

Now we will estimate about how many cases of sections we will need to use this season, and use our partly-filled sections accordingly. We ought to put in one or two of them to each row of sections to give the bees something to climb up on, which seems to help them very much.

Then there are the honey boards, or cases, to hold the sections on the hive; clean them all up too, then put in the sections, tin separators, and wedge all up firmly, and set upon the shelf ready for use. It is not always best to put on a full complement of sections at the first, so when the time comes we

can only put on so many as we judge the colony can take care of.

Now for the hives and extra combs; we look them all over, dig out a mud dauber's nest here, a patch of propolis there, clean them all out. Our frames of empty combs need pruning some, a bit of drone comb here, another spot where the moth may have spoiled it, and fill up the vacancies with a piece of foundation. This work you will need to do in a warm room, for foundation and comb are brittle things in cold weather, but propolis comes off the best where it is cool.

Then there is our old smoker, look how it is "stuck up," not with pride, but honey and soot, do not forget to clean that up too, and set the old shop to rights generally, and we will find plenty to do, I will warrant you.

Now let's see, have we as many sections, and as much comb foundation as we will need this season? I do not believe we have; and now we have been pretty busy and got rather tired, to-night we will write out an order to send off to-morrow to the dealer for the needed supplies. If we order now, he can get our goods ready at his leisure, but after awhile he will be so busy filling orders that we may have to wait, and lose precious time, for when the honey is coming in fast, time is honey and honey is money. "In times of peace prepare for war," go now, get ye ready for spring work!

A Cat's Experience with Bees.—The Virginia City, Nevada, *Enterprise*, gives the following amusing anecdote:

Charles Kaisey, who has the only hive of bees in town, says that when he first got his colony his old cat's curiosity was much excited in regard to the doings of the little insects, the like of which she had never before seen. At first she watched their comings and goings at a distance. She then flattened herself on the ground and crept along toward the hive, with tail horizontal and quivering. It was clearly evident that she thought the bees some new kind of game. Finally she took up a position at the entrance to the hive, and when a bee came in or started out, made a dab at it with her paws. This went on for a time without attracting the attention of the inhabitants of the hive. Presently, however, Old Tabby struck and crushed a bee on the edge of the opening to the hive. The smell of the crushed bee alarmed and enraged the whole colony. Bees by the score poured forth and darted into the fur of the astonished cat. Tabby rolled herself in the grass, spitting, spluttering, biting, clawing, and squalling as a cat never squalled before. She appeared a mere ball of fur and bees as she rolled and tumbled about. She was at length hauled away from the hive with a garden rake, at the cost of several stings to her rescuer. Even after she had been taken to a distant part of the grounds the bees stuck to Tabby's fur, and about once in two minutes she would utter an unearthly "yowl!" and bounce a full yard into the air. On coming

down she would try to scratch her ear, when a sting on the back would cause her to turn a succession of somersaults, and give vent to a running fire of squalls. Like the parrot that was left alone with the monkey, Old Tabby had a dreadful time. Two or three days after the adventure Tabby was caught by the owner, who took her by the neck and threw her down near the bee hive. No sooner did she strike the ground than she gave a dreadful squall, and at a single bound reached the top of the fence, full six feet in height. There she clung for a moment, with a tail as big as a rolling-pin, when, with another bound and squall, she was out of sight, and did not again put it an appearance for over a week.

Plant for Honey.—The Chicago *Herald* remarks as follows on this important topic:

Our pleasant and useful cotemporary, the AMERICAN BEE JOURNAL, of this city, is quite emphatic in its recommendation that it is a wise thing to grow both trees and plants which afford a supply of honey for the bees. Among plants it recommends the well-known sweet clover, which will give them continuous pasturage from June until it is too cold for the bees to fly. So far as trees are concerned, there is none of such value as the basswood or linden, though its season is quite short. It is a very beautiful and healthy tree in all parts of the country, and once established is easily grown. We understand that it may be raised from cuttings, though they will require considerable care the first year. The linden is a very beautiful tree, especially when full of fragrant blossoms in early July. The quality of the honey from this tree is very superior, having a flavor almost equal to the wild sage honey of Lower California. Certainly it will pay to grow both trees and plants for honey, and so far as the trees are concerned, the sooner they are planted the better.

Local Convention Directory.

1882. *Time and Place of Meeting.*
- April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.
- 25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.
- 26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.
- 27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
- May — Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.
- 16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.
- 25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8oz.

CORRESPONDENCE

For the American Bee Journal.
The Longevity of Bees.

E. A. THOMAS.

It seems to me that this subject is of vital importance to the successful cultivation of the honey bee, and I wonder that it has not received more attention at the hands of prominent bee-keepers.

Every one has doubtless noticed the difference in the length of life in the human family; how, in some families generation after generation will live to a ripe old age, unless prematurely shortened, while in others each generation grows old much earlier in life, and die of old age at an age when others would be in their prime. You will also notice, in examining the records of families, that the average length of life of each successive generation, many times either increases or diminishes. This has also been noticed in many of the lower animals, and it is only reasonable to suppose that there is also a great difference in the length of insect life.

As there is no effect without a cause, we must endeavor to ascertain the causes which tend to lengthen or shorten the life of *apis mellifica*. I have conducted many experiments for the purpose of determining these causes, the result of which I give below:

First, in regard to the longevity of queens, I have found that those reared from the egg live to a greater age, and their offspring are capable of greater endurance and of longer life, than those reared from old larvæ. This is demonstrated by noting the condition of colonies having such queens, at intervals through the season. Those containing queens reared from the egg will be found to steadily increase in numbers until the hives cannot hold their teeming population, while colonies having queens reared from old larvæ, never become very strong even though the hives are crowded at all times with brood. While the latter may increase as rapidly as the former early in the season, they will fall far behind later on, when the places of the fast dying bees must be supplied by the hatching brood. It is reasonable to suppose that a queen reared from the egg will receive a more full and perfect development, than where the development is forced, as is the case with queens reared from old larvæ.

Thus I have found that the longevity of each succeeding generation from any queen can be greatly augmented by breeding from the egg and every queen I rear in future will be bred in this way. By breeding from bees that are long lived, considering both the life of the queen and her offspring, we may greatly improve our bees in this direction. I will speak of the value of long lived race further on.

There are certain unnatural causes which tend to shorten the life of a queen and of her offspring. Queens that are balled and hugged by the bees when introduced, until they have a greasy appearance, will be found to be very short lived. I consider such queens as utterly worthless and destroy them at once. There are other causes which time and space will not permit me to speak of.

Second, the longevity of drones must have more or less influence upon the length of life of the queen's offspring. As we cannot wholly control the mating of our queens, we must depend a good deal upon chance for their mating with long lived drones; but we may considerably lessen the chances of poor mating, by stimulating the colony that produces the finest drones to rear a large number, keeping all others cut off or trapped. It is very difficult to ascertain the age of drones, and almost impossible to determine their average length of life in different colonies. I once induced a colony to retain their drones all the winter, by stimulative feeding, and allowed them to rear none the next spring. In June I found many drones in the hive, which had every appearance of being very aged, and I have no doubt that they were the ones reared in the colony the fall previous. I induced this colony to rear a large number.

Third, the longevity of the workers must depend upon that of the queens and drones. This is a self evident truth, and does not need to be demonstrated by experiments. If we find the workers in a colony very long lived, we must conclude that either the stock from which they sprang or the drone with which the queen mated, or both, were long lived. While we have no means of knowing where the drone came from, we can trace the stock back on the side of the queen, if a careful record has been kept—and here is where the "Apiary Register" proves of value.

If the reader will pardon the digression, I will say here that all who understand the value of a fine strain of bees, and who wish to improve their stock, will do well to send to the Editor of the BEE JOURNAL and get an *Apiary Register*. He has gotten up a neat and well bound book which is cheap at the price, and it should be in the hands of every bee-keeper. In my next article I will give a few hints about keeping the Register, marking the queen, etc.

But to continue: In determining the longevity of bees, you should note their condition in spring; in the case of short lived bees, the colony will dwindle badly in spring; do not understand me to say that all bees that dwindle in spring are short lived, for there are many other causes which produce dwindling. The bee-keeper who is troubled with spring dwindling should investigate the matter, and if he cannot find any abnormal condition of the bees that would cause the trouble, it is safe to conclude that they are short lived or weakly. The remedy is to introduce new blood into the apiary from some long lived race,

breed from that stock and keep the drones of the other cut off or trapped.

The importance of this subject must impress itself upon the minds of all after a careful consideration of the question. It is as important in breeding a fine strain of bees to endeavor to augment the longevity of the race, as it is to breed for hardiness. Long lived bees will endure more, and consequently will store more honey in summer; the colonies will throw off larger swarms, which will not dwindle from the effects of hard work before the new brood begins to hatch; and last but not least, they will live long enough in spring to recuperate their strength of numbers, and rear sufficient brood to take their places when they shall "give up the ghost."

I can see a marked improvement in my own bees since I gave attention to this subject, and I am not troubled in the least with spring dwindling or with weak colonies; they always keep strong and vigorous.

Coleraine, Mass.

For the American Bee Journal.

My Very Strange Visitor.

G. M. DOOLITTLE.

A stranger by the name of L. W. Vankirk called, a few days since, to have a friendly chat with Doolittle (see page 63, BEE JOURNAL). As I am always "chatty" the time passed off pleasantly. Upon departing the stranger found Doolittle was more a fact than fiction, for, somehow, Doolittle's talk was of about the same tenor as his articles in the bee papers—thus the stranger was satisfied that a *chat* only developed the truth that Doolittle was the same matter-of-fact man which he had read about. However, I learned some new things which *might* be of great advantage to me and as I am always free to give the readers of the BEE JOURNAL all that I learn, I will tell you about it.

Bee-keeping to be most profitable should become a "side issue," for in this way with the help of "the girls" and a day spent "now and then," by a busy farmer, \$800 can be easily made in a season. Also, if you wish to make a big report, let your bees become weak by keeping them in a cellar ranging from 30° to 35°, cooling them off gradually once or twice a month (many may not wish to try this plan, but my strange friend would) so that you can double them down to a small number. Now, do not feed back any unsalable honey in getting the bees ready winter, nor any of that taken from the nucleus in uniting in the fall, till after all is weighed and thus you can make a big report, and "do one hand's work on the farm" besides.

I had heretofore supposed to make an *honest* report that no honey should be counted but that *actually* sold, but my strange friend has put me on the road, so that I can swell the amount largely; therefore look out for a "magnificent" report next fall.

Then again I learned how to "draw largely on the sugar barrel" and thus

get a large return from this, as a part of the side issue. I have used no sugar heretofore, except in the spring of 1878 to keep my bees from starving, so right here I can score another point toward that "grand" report, next fall.

Surely such a "side issue" can be made a great source of wealth, for, if an L. W. Vankirk can make \$800. therefrom, by spending a few days' time from his more profitable farm, a specialist who can devote his whole time to the business can make his thousands. I presume we shall hear no more about specialists as honey producers, after this.

Borodino, N. Y.

For the American Bee Journal.

Reply to A. R. Kohnke's Review.

CHAS. F. MUTH.

In reply to Mr. Kohnke's review on page 56 of the BEE JOURNAL, I must say, a review, as the name implies, is the view of a party on a subject of former date. It may show the character of both parties, whether they are practical men, or whether the knowledge of one or the other is merely of a theoretical character.

Nothing improves our knowledge more than a free discussion, and a difference of opinion serves generally to throw light on a subject. I do not often indulge in literary attempts, and when I do, other business does not permit me to dwell too long on any one subject. I must make my articles short, and avoid repeating. For instance, when an article like the above mentioned review requires an answer, I must not postpone it until next day, because by that time, something else is occupying my brains and time, and the reply would never be made.

I have read some bee books and had some practical experience with bees, and whenever I wrote about them, I gave facts as they appeared to me. If I have been wrong at any time, I am willing to be corrected, and if convinced, shall acknowledge it like a man, and no hard feeling will be created thereby against any body.

However, in the "review" of Mr. Kohnke, I fail entirely to see where I have erred, although he counts up "three mistakes," as he states, which sound just as plausible to the uninitiated, as the great discovery of the application of electricity on a swarm of bees, which was published in the BEE JOURNAL in March, 1880.

Mr. Kohnke states that, according to my statement, Hilbert's foul brood recipe was 50 grs. of Salicylic acid, and 400 grs. of pure spirits (or alcohol), which I suppose is correct. If it was not, I suppose he would have given the proper proportions, as he read, like myself, the German bee papers giving the details.

He next says that in 1879, my recipe was 8 grs. of Salicylic acid, 8 grs. of borax, and 1 ounce of water, and that in 1880 I recommended just double that strength, that he waited to see me correct it, and he concludes that I made some grave mistakes, and that he will show that the re-appear-

ance of the disease in my apiary may have been caused by the effect of the medicine—that is rich! If I do not make another grave mistake, Mr. Kohnke has kept 5 colonies of bees during one summer (from spring to fall), while living in the suburbs of our city, and if he ever kept bees before, I was unable to observe it. He was certainly no bee-keeper, and he has kept no bees since, which his last letter tells me. In the meantime, however, he was in some manner connected with Mr. Heddon, who, I venture the assertion, can tell us that Mr. Kohnke is not even able to open a hive of bees like a practical bee-keeper does it. His knowledge is theoretical, and as such is the fact, he should not have overlooked important points, as follows: My remedy to use with the atomizer, was and is now 8 grs. of Salicylic acid, 8 grs. of borax, and 1 ounce of water. But since I have cured the disease by the means of feeding, I have used the medicine of double strength, and one ounce of this mixture is answering for a quart of food. If the mixture were single strength, I should have to use 2 ounces. All of these matters have been duly reported every season, and every other matter of importance that came under my observation. Mr. Kohnke may improve his knowledge by looking that matter up. It is not worth my time to do so.

In my (alleged) mistake No. 2, as he calls it, Mr. Kohnke gives those two mixtures single and double strength, and says: "As Mr. Muth refers to those in his other articles and essays on foul brood, which is the right one? I (Kohnke), answer neither." This leads me to mistake No. 3, etc. This is not rich, but—well, I leave it to the reader to say what it is. Had I as much time to spare as Mr. Kohnke, perhaps I would repeat every time when occasion offers; but, as stated above, whenever I am through with one thing, I have something else to do and think about.

I have nothing to say about the chemical composition of my remedy, but that it is effective and does all I claim for it.

The matter may soon be sifted by parties better posted in chemistry than I am. My druggist, whom Mr. Kohnke, I think, knows, is a good chemist, says that Kohnke's statement is nonsensical.

No beginners should expect to meet with the same success as old hands. But, if anybody fails to cure foul brood when employing my remedy given at our Cincinnati Convention in 1880, and recorded in the BEE JOURNAL, and in my "Practical Hints to Bee-Keepers," it is because only the minority of men are successful in any undertaking. If they would take the same pains I did, they would be more fortunate.

"But," says Mr. Kohnke, "what about the cure he effected? some will ask. I (Kohnke) reply: A cure has never been effected, but Mr. Muth treated his diseased colonies to pure comb or foundation, and pure honey, by which a suppression of the disease has been effected," etc.

This is not rich, either, but it shows plainly that Mr. Kohnke never treated a colony of bees diseased with foul brood, and he, very likely, never saw one. It is, therefore, an assumption, so say the least of it.

There is no better authority than Emil Hilbert, whose articles on foul brood appeared in our German bee papers, and are the basis of my treatment, but which appear to have been carelessly read by Mr. Kohnke, or were misunderstood by him, because of his lack of practical knowledge. I have simplified Hilbert's arrangement very successfully, and I leave it to those who know me if I am guilty of assumption.

I am so little alarmed about the disease that I, last spring, bought out a neighbor's bees affected with foul brood for a number of years, and who used my remedy all along. I had told my old friend that he would not be man enough for the emergency, but he had to satisfy himself first, before he gave up the bees. His 8 colonies were placed in my apiary, and all his goods pertaining to bee-culture which I did not take along were burned before I left the place. Three of the colonies were still affected with the disease and cured during the first few months of spring. From my friend's apiary, very likely, dated a number of occasional cases of foul brood in my apiary, where, however, they could not do much harm, because I know how to cure foul brood, and I am not afraid to prove it.

Cincinnati, O.

For the American Bee Journal.

Fresh-Made Comb Foundation.

J. W. PORTER.

Permit an old friend to congratulate the BEE JOURNAL on its improved appearance. It is becoming more and more valuable, since the change.

I can indorse Mr. Isham's remarks in favor of wood separators for I have long used them. The smoother and harder they are the better, I think. They take up little more room than tin.

As I have seen nothing published in regard to the superior advantages and value of fresh made foundation I wish to ask why it is, for it must have come to the observation of many who are in the habit of using it. To me it seems that freshly made, or at least that which has not been allowed to become hard, is worth very much more, and there are times when I would prefer even to melt into wax that which is hardened by age and pay for fresh foundation. Is not there some way in which seasoned sheets may be made acceptable and pliable? I shall try a warm bath in slightly sweetened water and laying them damp in piles together, and only cut as wanted in the hives. Can any one speak from experience in this matter?

This is a question of great importance, for every one who uses foundation must at times carry over quantities of it. It is, in my opinion, something that has an important bearing

upon the tests made as to the relative value of that made from different machines—its *mechanical condition* at the time of insertion. I would call the attention of Mr. Doolittle to this point for his experiments were of great interest.

Last year I tried, side by side, in several different hives, three different kinds made on as many different machines, by well known makers, and invariably found that the sheets that were freshest and most pliable were the best. All I suppose were freshly made but some of it was pressed too hard. Especially I found this the case with the thin "flat bottom." There is no doubt but the chemical condition is affected by the presence of impurities, and over-heating affects the value greatly.

Having used foundation since its first introduction and fully realizing early the importance of its perfection, to honey producers, it is a matter of congratulation that invention has been so active in supplying our needs. Let us have all the light possible. In a suitable temperature sheets can be kept, if closely packed, a long time fresh, but the aim should be to give the most perfect work possible with the least pressure of the sheets. Such is my experience.

Since writing the above, I have a letter from a gentleman, who well deserves the name of bee master, for he last year produced from one colony more than 700 lbs. of honey. He goes so far as to say, that if he had to cut out and melt up starters that had been in the sections two months and put in new in the busiest season, he would do it. Are not others observing a difference of the kind named?

Charlottesville, Va.

For the American Bee Journal.
How to Detect Glucose.

W. C. PRESTON.

Having noticed in your excellent JOURNAL an inquiry for some simple method of detecting glucose, allow me to give your readers the test in common use in chemical laboratories.

The test is sufficiently simple and at the same time very delicate—and may, I think, be stated so plainly that the non-professional reader will find no difficulty in its practical application. It is based on the fact that if to a boiling alkaline solution of blue vitriol a solution containing glucose be added, a red precipitate of cuprous oxide will be immediately thrown down; while cane sugar will give the red precipitate only after protracted boiling. It will be necessary to prepare the following solutions, which may be bottled up and kept for use as required:

1. One-half ounce blue vitriol dissolved in one pint of rain water.
2. Three ounces caustic potassa dissolved in one pint of rain water.

Also procure a test tube about 6 inches long, such as may be found at most any drug store. Pour into this tube about a tablespoonful of the blue vitriol solution and add about an equal amount of the solution of potassa—a

light blue precipitate will be formed—now add a small quantity of the sweet substance to be tested (it is better to be in solution), and heat to boiling. If even a trace of glucose is present it will be revealed by the reddish tint immediately imparted to the liquor, best seen by looking down through the tube lengthwise. If there is much glucose a red precipitate will sink to the bottom of the tube.

It may be well to add that this test does not enable us to detect the adulteration of honey by manufactured glucose, inasmuch as all honey contains a large percentage of the same saccharine substance—but pure, as formed in Nature's laboratory—the nectaries of flowers.

State University, Iowa City, Iowa.

For the American Bee Journal.
Bee-Keeping in Australia.

S. MACDONNELL.

DEAR EDITOR.—The notice that appeared in a late number of your JOURNAL regarding the death of the late President Garfield, was one fitting any publication whatever its general object, and as, perhaps, I am the only citizen of this country who writes to the BEE JOURNAL, I shall not like the event to pass without an acknowledgment of the high esteem and respect entertained in all classes here, for one known to us only by his fame and noble character, and of the deep regret which was universally felt at the tragic end of your late President.

My Italian bees have progressed satisfactorily. At one time I was afraid that one colony had sent a swarm to the woods, whereby I should have lost one of my imported queens, but my fears have proved unfounded. I have but little time to try the Kabler or other process for securing the pure impregnation of queens, but have contented myself with giving Italian cells to queenless black colonies, after having removed the queen cells from all their own brood. I have treated about 15 in this manner, and an examination this week found about 12 with yellow queens, some showing an admixture of black. The number of Italian drones which I shall be able to rear next season, and the absence of black drones in my apiary, will, I trust, then give me a better chance of securing pure impregnation for a fresh batch of queens.

An enterprising German bee-keeper lately arrived, and was sent to me by the German Consul for advice. He showed himself to be a thorough master of the science, and I considered his proposal to run a farm of 400 colonies, but, as I was to find all the capital, and he to receive one-half profits, in addition to an allowance of £3 (\$15) per week, my estimates showed but a pittance for myself. The hives which he proposed using were to have dovetailed joints, to contain 10 frames, 8 inches wide, 13 deep in brood chamber, and 10 frames half the size in surplus gear, the surplus separated from the brood by excluder-zinc. The hive was to have a door at back, and

the frames to hang from a groove into which they slide. The matter, for the reason of cost without adequate returns, has been abandoned by me. I was much amused at his ingenious smoker, consisting of a deep-bowled pipe; the cap fitted with a muzzle, allowing the tobacco smoked to be puffed on to the bees, while the hands were free for operation. How would this suit Mr. Root's "tobacco column?"

I have determined to run a farm of about 100 colonies for a commencement, on a friend's orchard in the vicinity of Parramatta, about 15 miles west of Sydney. Oranges and other fruit trees are largely cultivated there, and in addition, there are many hills and valleys yielding an abundance of our native honey-producing plants. My present stock, at Homebush, where bee fodder is not sufficient to keep more than a small number of colonies, I intend to reserve as a queen breeding station, to supply Italian queens to the farm. Langstroth hives will be adopted throughout. Foreseeing the possibility of the venture assuming larger proportions, in course of time, when it would pay to employ an expert, I should much like to know the rate at which a man able to manage a large bee farm, could be procured from America on a 3 year's engagement, passage paid? Ordinary farm laborers get 25 shillings per week (\$6), and find their own board and lodging. Ours is a delightful climate, no winter, and bees thrive amazingly.

I wish you the compliments of the season, and a prosperous year for the AMERICAN BEE JOURNAL.

Sydney, Australia, Dec. 28, 1882.

[It is very doubtful if a skillful apiarist, such as would prove satisfactory and profitable, could be obtained for less than \$75 per month, for a three years' engagement. Good apiarists, seeking employment, are exceedingly few.]

Accompanying the above communication was the following list of articles exhibited by Mr. MacDonnell, at the Balmain Industrial Exhibition of 1881. As it will interest our readers to learn the progress of bee-keeping in Australia, we give it a place.—ED.]:

1. Diagrams of the Anatomy and Physiology of the Honey Bee—Published by the British Bee-Keepers' Association.
2. Langstroth Frame Hive, containing 3 stories, the first story having 10 frames for brood-rearing, the second having 10 frames for storing honey for extracting, and the third having 18 section boxes, each to hold 2 lbs. of comb honey.
3. Langstroth Single Frame Observatory Hive, allowing the whole economy of the hive to be brought under inspection.
4. Honey Extractor, by the use of which honey is extracted by centrifugal force from the comb, and the comb is returned to the hive, thus enabling

the bees to re-fill the same comb, time after time, without troubling them to build it afresh.

5. Comb Foundation—For compelling the bees to build straight combs for rearing worker bees, and preventing them from rearing drones.

6. Honey Knives, for uncapping frames of sealed honey preparatory to placing them in the extractor.

7. Syringe for washing drone brood out of cells.

8. Queen Cage, for introducing fresh queens into the hives.

9. The Cheshire Bee Trap, enabling bees to leave a box but not to re-enter.

10. Bee Smoker, for puffing small quantities of smoke into hives, whereby the bees, fearing that they are to be driven from their home, are induced to fill their honey sacs with honey; the consequence being that, like a man after a good dinner, they are not inclined to be quarrelsome, and the hive may be opened without fear of the operator being stung.

For the American Bee Journal.

Mr. A. R. Kohnke and Foul Brood.

D. A. JONES.

In reply to Mr. A. R. Kohnke, on foul brood, page 8 of the BEE JOURNAL for 1882, I would say that I am sorry his cure is too expensive, and requires too much time for me; besides, I do not know of a case of foul brood in Canada now, although I suppose there are some. A bee-keeper, a friend of mine, told me he knew of a case not far from him, which is about 40 miles from me. I told him how to cure it; he promised me to do so, last fall. I suppose he did.

Mr. Kohnke makes a proposition to cure in six weeks; why, bless his soul, I would not give him a cent to fool six weeks with a case of foul brood that can be cured with one or two hours' labor without the use of salicylic acid, or any other medicine. Twenty degrees below zero will not kill foul brood. Take honey from a badly-diseased foul brood colony, mix it with acid as strong as the bees can take it, and feed a clean colony; it will become diseased. The same honey boiled for fifteen minutes may be fed with impunity. But bad foul-broody combs sprayed with acid for days, then soaked in a strong solution of it, completely immersed, when given to a colony starts the disease. I will make the following offer to Mr. K.: if he will bring me a colony of foul brood that I cannot cure with a few minutes or hours of labor, I will give him one hundred dollars for it; I to use no drugs. Or, if he will bring me five very bad foul-broody colonies, and take an equal number himself, equally bad, if I cannot cure mine, without the use of the acid or any drugs, in less time than he can by the use of the acid safely, then I will forfeit five hundred dollars. We have no salicylic acid in Canada that cures foul brood, but we have plenty of men that can do it. But we have no means of curing it without melting up the

combs into wax; we return the wax to the bees made into foundation.

At some seasons of the year bees may first be shook into a clean hive, prepared with foundation; combs rendered into wax, honey extracted, boiled and fed back to the colony, and the hive and rack scalded for fifteen minutes. Dr. Duncan, of Embro, Canada, did this last spring (see *Gleanings in Bee-Culture*, page 32 for this year). If bees are removed from the diseased hive and made to consume all the honey in their abdomens before they commence breeding, no disease will appear.

Some recommend burning all. A gentleman in California wrote me some time ago that he had just burned 178 colonies, hives, combs, honey and all. Now this is bee murder, and a useless destruction of property. It reminds me of the bed-bug recipe that was being sold and guaranteed a sure cure. It read as follows: "If your house is infested with bed-bugs, just burn it and it will kill everyone without fail." I used to fear the moth miller more than I now do foul brood. The curing of foul brood is less labor with me than transferring from log-gums, and when I hear of any in this part of Canada, I see that it is cured.

Now some may think from the above that foul brood is not the dangerous disease that it is represented to be, and if they just shake off the bees from the combs of a diseased colony into a clean hive of combs, and whistle Yankee Doodle, that the job is done and the disease is cured. Such, however, is far from being the case. If bees are placed on empty combs immediately from a diseased colony, some will carry their sacs full of the diseased honey and empty it into the cells of the clean combs, then, perhaps, go to the fields, gather more honey, and store it on the top of the diseased honey. Now, that honey might remain there for a long time, but when fed to larvæ it would bring on the disease. The great danger in treating the disease is in bees from clean colonies getting a drop of the affected honey, as all the honey in a diseased hive is affected, and one drop of honey from the affected hive will start it in a clean colony. So all operations should be performed when bees are not flying, or under a wire tent, or some other device that prevents any other bees from getting one drop of the diseased honey. An old saying is, "An ounce of prevention is better than a pound of cure," and this is doubly true in this case, for 100 colonies may all become affected by the careless handling of one colony. When honey is scarce you should make your bee-yard a quarantine as far as possible.

I will give the following mode of curing: Suppose a person has a large apiary affected with the disease, I would first remove all the combs not containing brood, extract the honey and boil it, then it is ready to feed back. Render the combs into wax and make it into foundation; boil the frames 15 minutes, and fill in the foundation again, placing them in clean hives. I next drum and smoke the

bees until they all fill themselves with honey (this is very important, for if some are not filled, they will die when others have plenty); then shake off as many bees from the colony as can be spared, always taking the queen from the colony, leaving enough to nurse the brood; place them in a box, cover it with wire cloth, carry it to a dark, cool cellar or bee house, lay it on its side, and allow the bees to remain there from 60 to 80 hours, until you see them beginning to drop down and show signs of starvation; then shake them into the clean hives with foundation, feed them, and put them into a new location at least 1 or 2 miles away from the diseased yard. Queenless colonies will not last as long when left to starve as those with queens, and should be doubled with others, or watched more closely, as they are sometimes so restless that they exhaust their food in 2 days or less. It will not do to put bees in a light, warm place to starve, as some run around and get excited, consuming all the honey in their sacs, and starve, when others more quiet have plenty. A dark, cool, quiet place, where they remain clustered quietly, is the proper place.

It will not do to remove the affected colonies and keep the purified at home, unless they are taken 3 or more miles away, as sometimes bees return to their old location, and might bring the disease with them; while if any of the purified ones return, they remain and are treated with the others again when the brood hatches. As soon as the queen and bees are removed for starving, the hatching brood and bees should be doubled up so as to have all colonies full of combs of hatching brood. The empty hives thus secured should be scalded for future use. As soon as all the brood hatches, the bees may be brushed off the combs after being made to fill themselves with honey, same as the first, placed in some boxes as the first were, and treated in the same way. While they are starving, scald the hives and frames, render the combs into wax, make it into foundation, return it to frames again, place them in the purified hives, and put your starved bees into them again. The honey that was in the combs, of course, should be extracted before cutting the combs out of the frames, and boiled to feed them. Now bring the first lot purified back to the yard again, and you have all your bees and hives purified and free from disease, if you have done it as it should be done, without any loss except your time.

Now, if it is done when there is no brood in the hives, or if you do not care to save the brood, the entire yard can be purified in about 3 days, as you remove all the bees from every hive to starve, while they are starving the hives are boiled, honey extracted and boiled for feeding back, combs rendered into wax, made into foundation, returned to the frames after they are boiled to disinfect them, return the frames with foundation to the purified hives, and the bees when starved may be shaken back in the hives on the original stands, and fed back their

purified honey. The honey should be kept at the boiling heat for 15 minutes.

I know of many other plans and ways of doing it, some less trouble and quicker done than the above, but do not wish to give any that could not be carried out by a novice.

There is no more need of losing a colony by foul brood than by queenlessness, and it is so simple and easy to cure when thoroughly understood, that I hope it may be completely wiped out in America. I am sorry to have to trespass so much on your valuable space, but trust there may be no more burning or destroying bees from the above disease.

Beeton, Ont., Canada.

For the American Bee Journal.

Prohibiting Imported Bees.

JULIUS TOMLINSON.

The BEE JOURNAL arrives regular, full of good things. In looking over No. 3, when I came to page 34, I had a hearty laugh over the editorial, in relation to an extract from the *Detroit Evening News*. As I am the Michigan bee-keeper referred to, perhaps I ought to "rise and explain."

There are some things in this State, a little peculiar and different probably from same things in other States: 1st. The *Evening News*, with an immense daily issue, wide awake and enterprising, and which advocates free trade, with a zeal that "no lawyer knows," in which advocacy I am free to say, I heartily concur.

2d. A very worthy Governor, but who lives in Saginaw, and believes that salt, if not king ought to be.

3d. The action of Governor Jerome in appointing delegates to the high tariff convention in New York last autumn; and

4th. The coming State Bee-Keepers' Convention, at Battle Creek.

It was in reference to the above situation that the following was written, and published in the *Evening News* of same issue, as the extract quoted in the BEE JOURNAL:

"There is to be holden in Battle Creek, Dec. 9th. an important industrial convention. It is the annual meeting of the Michigan Bee-Keepers' Association. The production of honey has become a very important industry, and many thousands of dollars are received annually by the bee-keepers of the State. As this is to be a very important meeting I would respectfully suggest to our most excellent Governor, that he appoint delegates from different parts of the State to attend that Convention.

"I would also remind the Governor that a certain Mr. Jones, of Canada, is largely engaged in bee-keeping, and is selling large numbers of queens to bee-keepers on this side of the line. His queens are very superior stock; they are endorsed and recommended by Prof. Cook and most of our leading bee-keepers. Mr. Jones has spent many thousand dollars to procure this stock. He has himself visited Palestine and Cyprus on purpose to procure superior queen bees. He has also em-

ployed Mr. Frank Benton, a citizen of this State, to visit Ceylon and Java, where amid untold perils he searched for that wonder of the insect world, the *Apis dorsata*.

"Now, Mr. Jones, being a foreigner, I would respectfully implore the Governor, in his next message, to recommend that Michigan bee-keepers be protected against these Canadian queens. If it be said that this is no part of the Governor's business, I would say that this is in exact accordance with the Governor's action in other matters. Has he not recently appointed citizens of this State to attend the high tariff convention in New York, and did he not in his first message recommend that Michigan Salt be protected from "the Canadian article?" This is very important and I hope the Governor will seriously consider these matters. Canadian queens should not be tolerated in this State. J. TOMLINSON."

Of course the *News* made a blunder when they talked about the drones being laborers, otherwise I see no great incongruity in the comments of the *News*. Doubtless, if you had had all the points, your editorial would have been somewhat different.

Allegan, Mich.

[The above article has somewhat of a political cast, with which the BEE JOURNAL has nothing to do; but as it is rather necessary to explain the curious article copied from the *Detroit News*, and commented upon on page 34, we give it a place.—ED.]

For the American Bee Journal.

Potatoes as Bee Enemies.

A. R. KOHNKE.

The writer of a prize essay in a German bee paper, attempts to prove that the potato may be considered as a bee enemy. After going into a lengthy discussion of the comparative nutritive value of potatoes and honey, he comes to the conclusion that it would be far more profitable, especially for people being in possession of only a few acres of land, to devote that to the cultivation of honey plants, to the exclusion of potatoes, inasmuch as all available ground is taken up to raise that vegetable, and not a single weed is allowed to grow which might furnish the bees honey.

Though it must be admitted that potatoes are very poor in nutritive qualities and honey rather rich, it would not be good policy for any one having one or two acres, to plant for the bees, and buy his vegetables with the proceeds of his apiary.

The main object of the article above mentioned was to induce bee-keepers to provide a better pasturage for bees. To this fact the bee-keepers in Germany seem to be as alive as some are in this country. Whether it will or will not pay to sow exclusively for bees, I intend to prove myself next summer. Bee-keepers or others who have seeds of supposed honey plants, not for sale anywhere, and have not

the time or land for experimenting, may send some to me, free of charge (say enough to cover at least an acre of ground), name of plant and time of bloom should be noted. Results will be reported in due time through the BEE JOURNAL.

Youngstown, O.

For the American Bee Journal.

Does it Pay to Rear Dollar Queens?

REV. A. SALISBURY.

I frequently notice articles in the bee papers stating the profits of rearing and selling untested queens; but these advocates of Dollar Queens present nothing new to inspire the confidence of bee-keepers, of long experience, in their assertions. It may do, where one owns a bee paper in which to do his "puffing," and who buys queens at from 50 cents to \$1 and sells them at \$1.50; but the one who rears them—does he make money in doing so?

There seem to be many who look upon the proceeds of a queen-rearing apiary as largely profit. But let us see if we cannot do better than to continue to sell fine queens at \$1. After awhile we may want something for our labor, besides bare expenses.

Let us examine the matter a little and try to find the profits, if any. We will suppose that an expert can rear, fertilize and sell 500 queens and receive therefor \$500. That looks like good pay for 4 month's work; but let us examine further. The expenses for circulars, advertising and correspondence are \$90; 500 cages \$50; say 50 queens lost in the mails, \$50; syrup for feeding 100 nuclei, \$100; for feed for colonies after consolidating in the fall, \$35; lamp nursery and oil, \$7; postage on queens, \$10; wages for an expert, at \$40 per month, for 4 months, \$160. Total, \$512, or \$12 more than the queens sold for.

In the above I have said nothing about how many good colonies must be robbed of cell builders to rear the 500 queens, for royal cells must be built in good colonies, to produce the best queens. Neither have I taken into account the capital invested in nucleus hives, feeders, etc.; nor the number of queens to be replaced to make all satisfactory when complaints are made; nor have I mentioned the many combs cut up for eggs to rear queens from, for the colonies containing the finest breeding queens get no surplus honey, as they must be handled all the time.

Mr. Hutchinson tells us that a breeder cannot rear "dollar queens" at a profit, if he allows some of his nuclei to stand queenless several days, for lack of queen cells. All, of course, will subscribe to this statement, but all will not agree that they can be reared at a profit when cells are constantly on hand. And more than that, in this latitude, we have, as a rule, about two months in the 4 that the flow of honey is very light, during which time the bees largely refuse to take either a cell or young queen at once, and say by their actions, we pre-

fer to be without a fertile queen 25 or 30 days, rather than to take the strange task you want to impose upon us. And in running 100 nuclei it is out of the question for one hand always to keep them filled with queens against their will. If others can do it, they can do what I never have done, in the past 20 years, and I fear I am too old now to learn that art.

If any should ask why I rear dollar queens, I answer, that the course pursued by others, sometimes leads us to do things we do not approve.

Camargo, Ill.

For the American Bee Journal.

More About the Best Bees.

JAMES HEDDON.

The reason why I am so anxious to get at the cause of bee dysentery, is because I hope that to know the cause will aid in stopping the effect. But in regard to the birth-place of Italians, Cyprians, and Holy Landers, and the number of original rings, these points have as little to do with our success in the pursuit, as a knowledge of the rings of Saturn, and they are of far less interest to me. There is sublimity about the rings of Saturn, but almost a quarrel about the rings of bees. All we need to know is, which are the best bees, and which is the best way to produce better ones. Why then should we spend time theorizing about origin, color, parthenogenesis, and "tweedle-dee and tweedle-dum," when the whole matter is practically one capable of full demonstration.

When we have produced *apis Americana*—that is a fixed type of the best bee on earth—then will be time enough to count the spots and hairs sufficiently to know them wherever seen. When that time comes these bees will sell for their qualities, and the spots will be thrown in.

Mr. Demaree says it was kind in me to try to help Mr. Dadant out of his trouble. That is the first intimation I had that Mr. Dadant was in any trouble. I hardly think anyone except Mr. Demaree has made any such discovery. Perhaps it is so, and it may be quite natural that Mr. Demaree should be the first to discover it. If Mr. Demaree has got him into this trouble, he should have had more respect for age, and priority of position. Mr. Dadant is "old" in the bee business, and especially the importing trade; he has been through these far-off birth-places of our imported stock; he has fooled the best judges and most experienced American apiarists so long, that to trap him now, makes me feel as though the stores of honey we have obtained from bees of his importing and breeding, may be only a myth—a dream!

Mr. Demaree says that in a late article I intimate that the opinion of those who make large reports, is of more worth than those who make small ones, or none at all. Were Mr. Demaree not a lawyer, he would never have thought of borrowing that "none at all" to strengthen his position with.

If I have my eye on the remark that Mr. Demaree alludes to, I said substantially this: That a friend got a perfectly enormous yield of honey and increase; that he had been some years breeding a cross between the Italians and Germans to get it with; that he got much of it from red clover; that these "hybrids" stored 40 lbs. of surplus comb honey from red clover alone, when the "golden Italians of the period," did not obtain one pound; that another friend obtained 200 lbs. of surplus comb honey per colony, from 150 colonies, and from some of the best 400 lbs. each; he also had mixed bees of careful breeding. The reason the names of the parties was not given is because they wish it so, to the end that they would not be written to for queens, which they do not have to sell, surplus is their main business. I thought these reports which I knew I could depend on, presented a strong argument of the demonstrative order.

Does Mr. Demaree expect to wash away this proof by giving the credit to location entirely? Suppose the location to be the best this side of the Rocky Mountains (which I know is not the case), would not good bees get such a yield? Mr. Demaree fails to explain why the Italians, of rings and royal pedigree, in this same splendid location got nothing. But I shall not ask him to wade where the water is over his head.

Whether just or not, it is exceedingly handy to cut down the merits of others' successes by saying "grand location," and excuse the failures of your "ringed, striped and speckled" bees by charging it all up to a large honey crop. Upon this very subject, hangs much of our future success or failure.

It seems to me that whoever makes a convert to rings, hairs and down on the hind leg, without practical qualities, does him great harm. For that reason I am earnest in the discussion of the subject. I respect Mr. Demaree's opposite opinions, and admire his vigor of putting them, but I doubt his ever having had the right sort, or right amount of experience in the matter.

Dowagiac, Mich., Feb. 3, 1882.

For the American Bee Journal.

The Controversy about Pure Bees.

CHAS. DADANT.

Mr. Demaree, of Kentucky, says he has overthrown all my arguments. If so, he must have proved the assertion he made, which was the subject of this controversy: that the Cyprian race is gentle and peaceable, and that the dark Italians, which I have imported for 15 years past, are ferocious hybrids. He has also proved (as he says), that the Italian race is not a pure race. If all this is satisfactorily proven, by Mr. Demaree, I will leave the field to the victor, and allow the reader to judge for himself. It were idle to argue with so good a lawyer.

Hamilton, Ill., Feb. 6, 1882.

CONVENTION NOTES

Indiana Bee-Keepers' Convention.

The annual meeting of the Indiana State Bee-Keepers' Association, was held in Indianapolis, Jan. 24. The meeting was called to order with President J. H. Orear in the chair, all the officers being present. But a small amount of routine business was transacted when the meeting adjourned for dinner.

The attendance after dinner was considerably increased by the arrival of belated members.

Shortly after 2 o'clock, Gov. A. G. Porter arrived, and entertained the Society with a very neat address. In the course of his remarks he said:

The value of the honey produced in this State in 1881 is reported by our Bureau of Statistics to have been \$207,042. In 1880 the value of this product was \$239,525. The reduction of value in 1881 was occasioned by a short production which happened on account of the extreme severity of the winter, which was very destructive to bees, and from the drouth of the summer, which diminished largely the supply of "nectar" from which the honey is produced. This reduction was general throughout the country.

The production of honey is not one of the great industries of the State, though the business when skillfully pursued, is, I am informed, quite a profitable one, and the climate and "pasturage" of the State are favorable to the bee and to a large product from its labor. It will probably not for many years to come be pursued singly, to a large extent, as an industry; but as a by-business of the farm, to amuse the leisure of the farmer's household, and at the same time add to the receipts of the year, it may be largely and most usefully increased. There is nothing about which more has been written than upon the bee and its habits, and the more these are studied the more entertaining and engaging they become.

Aristomachus, we are told, spent 60 years in the study; Lord Brougham, the busiest statesman of his generation, took time to make chemical analyses of the honey comb under various conditions. The interest shown by this Association in bee-culture and in the product of the hive, shows that the industry is likely to excite more and more attention. Like the butter-maker, however, you are met by competition. It takes an extremely delicate palate to distinguish between oleomargarine and any other than the very best quality of butter. Oleomargarine is eaten every day, on perhaps $\frac{1}{4}$ of the tables in our cities, without a suspicion that it is not butter. The artificial honey is hardly less deceptive, and unless honey is eaten from the comb, there is little assurance to the ordinary palate of its purity. It is said, however, although the bee is now assisted in its work by manufac-

turing for it the base of the honey comb, that human skill has not reached the point of manufacturing cells which will pass for genuine cells of the comb. So far, your industry is protected from the ingenuity of imposters.

By resolution of Mr. Scholl, a vote of thanks was tendered the Governor for his address, and the interest which he had shown in the Convention.

The larger part of the afternoon was taken up in the discussion of suggestions brought out by the Governor's speech. After the transaction of some unimportant business, it was decided to hold a night session, the meeting adjourning until that time.

Promptly at 7:30 the meeting was called to order, when the President proceeded to deliver his annual address. After reviewing the history and the object of the Society, the President said: "I hold it the duty of every apiarist, young or old, to be always ready when called upon, to give a reason for the hope there is in him. And since I hold myself second to none in fealty and devotion to the cause, I make bold to bring my humble tribute, and lay it beside many brighter garlands on the shrine of our Society. Since our last meeting, many of our brightest hopes and fond anticipations have been blighted. The death angel has been in our way, and many of us who failed to have our hives in proper condition, found in the early spring "*articulo mortis*" written over the doors of many of our most beautiful colonies—even whole apiaries have been depopulated. The complaint is not confined to one locality, but is universal through all the northern states, especially so in the more improved portions of the country. In the unimproved portion, away from large orchards and sorghum factories, they suffered the least. The course of this wide spread disaster should claim our most particular attention at this time, and if there is any way by which we can avoid another visit of this, the worst disaster that has befallen apiculture, we should improve it.

We find that no manner of wintering had anything to do as a preventive, that is so far as packing was concerned, for we find that those who had their bees in the cosiest nooks did not escape, while in some cases those occupying most exposed places came through all right.

While acknowledging that many prominent bee-keepers did not agree with him, the President attributed the principal cause of disaster to allowing the bees to go into winter quarters with uncapped honey, which, by fermentation, is formed into carbonic acid and alcohol. He advised the removal of this uncapped honey, in his opinion, the rock on which we had stranded.

He said bee-keepers of to-day must improve on what they have learned, be open to conviction, and learn from any and all sources, for it is by gathering a little here and more there that we have arrived at our present state of apicultural knowledge, and by looking back over the past we can see

what grand strides we have made in the last few years.

The President's address was discussed at some length.

Mr. C. F. Muth, of Cincinnati, did not believe it necessary to remove the uncapped honey; thought very much more depended on the proper ventilation of the hive. He gave his plan for preparing hives for winter. He removes the second story, Langstroth hives, lays 2 or 3 slats across the frames, under the cloth, to give room for the bees to pass over the top of the frames. On top of the cloth he places a straw mat about one and a half inches thick, a sample of which he had present. On top of this mat he places two additional slats of which he lays the cover of the hive, allowing a free circulation of air between the mat and cover.

The subject of wintering was discussed to a late hour, when the meeting adjourned to the next morning.

The first business on reassembling was the election of officers for the ensuing year. The nominating committee recommended the following names: President, I. A. Cotton, Traders Point, Marion County; Vice President, Jonas Scholl, Lyons Station, Fayette County; Secretary, Frank L. Dougherty, Indianapolis; Treasurer, Mrs. Lizzie Stout, Indianapolis.

There being no other candidates, on motion of Sylvester Johnson, Mr. Davis was instructed to cast the vote of the Convention for said nominees.

On taking the chair, President Cotton made a few pleasant remarks; thought the Association could not do too much in furthering the interests of apiculture. He did not contemplate extensive bee-keeping himself, but was satisfied beyond a doubt that, as Gov. Porter had expressed it, it was a by-business which would pay equally as well, if not better, considering the amount of capital invested, than poultry raising, sheep husbandry, or the various other kinds of by-business, to which the average farmer must resort for success.

The next thing in order being the election of delegates to the National Convention, Messrs. Cotton, Scholl and Dougherty were elected as such delegates, and were instructed to ask the Convention to come to Indianapolis for their next meeting.

Considerable time was given to the subject of the care of honey, especially to extracted honey.

Mr. Muth wished to impress it on the minds of bee-keepers, that honey should be thoroughly ripe before being placed upon the market, that freshly extracted honey should never be closed up, but should stand in open vessels for at least from 4 to 6 weeks, and in a warm place before being closed up.

Other equally important subjects to bee-keepers were discussed at great length, such as "Progressive Bee-Keeping" by Dr. H. Peachee; "Preparing Bees for Winter," by Jonas Scholl; "Wintering Bees," by L. R. Jackson; "Statistical Report," for Spencer County, W. F. Ranzler, all of which were fully commented on.

After returning a vote of thanks to Secretary Herron, of the Board of Agriculture, for favors shown, and to Mr. C. F. Muth, of Cincinnati, for his kind assistance, the Society adjourned subject to the call of the executive for the next annual meeting.—*Indiana Farmer.*

Read before the N. E. Convention.

Failures in Apiculture.

A. J. KING.

Just in proportion that knowledge has increased in relation to any given pursuit, the number of failures have diminished, and the profits increased. But the field of practical knowledge is now so wide, and the number of avocations in which one may engage for a life work are so various, that it is impossible for one mind to master the details of all, or even any considerable portion of them. Yet if what is undertaken is not thoroughly understood and one's knowledge practically applied, mistakes and failures will continually occur, and a business which might have been pleasant and profitable, degenerates into one of hazardous drudgery. In short, one must realize that what is termed "good luck" is only the result of carrying out intelligent plans with a strong heart and willing hands, and that "bad luck" is the reverse of this.

After the general introduction of movable-frame hives in this country, the average of honey production greatly increased. Still, 50 lbs. of surplus honey to the colony was regarded as a wonderful yield. Now, from 100 to 300 lbs. per colony is often realized, and we have instances where 500 and 700 lbs. have been taken. Permit me to predict that the time is not far distant when under a combination of the most favorable circumstances, 1,000 lbs. from a single colony will yet be realized. And I will further state that I believe most of the circumstances themselves will yet be under the control of the apiarist.

Twenty years ago, when the maximum yield was about 50 lbs., many believed that the bee-keeping industry had reached its meridian, and that further substantial advances were impossible. To-day multitudes hold the same opinion regarding our present status. As the former class did not anticipate the scores of new methods and appliances now in use, so the latter see nothing more in the womb of the future to be brought out and developed. It is a well known fact by practical apiarists that the great bulk of honey taken in a season is gathered by the bees in a comparatively brief period, and that if the sources of supply would continue to yield as long as the weather would permit the bees to fly; that the total amount of honey at the close of the season would be more than trebled.

Add to this the significant fact that the cultivation of honey crops is yet in its infancy, that very many plants require for honey secretion very different conditions of the atmosphere and soil, and we have the conditions

for a constant honey-flow, for in a large tract covered with these plants of varying dispositions, some would be continually under the proper condition no matter how often the shifting of the weather should occur.

Through the influence of conventions and publications on bee-keeping, the ideas and devices of our best and most experienced apiarists relating to all the different phases of the subject, from the rearing of the bees to the disposition of their products have been widely disseminated, and the causes of failure have been constantly lessening, until now it may be truthfully said that he who embarks in the bee business and fails to realize a fair compensation for the time and capital invested will very generally find the causes of his ill-success within himself. He has most probably gone into the business under the popular delusion that bees not only "work for nothing and board themselves" but they clothe their owner in "purple and fine linen," and enable him to "fare sumptuously every day."

Success is the product of a great many factors in the bee-keeper's arithmetic, multiplication, subtraction and division may be profitably resorted to at times, but if addition (feeding) be neglected, the result will surely reveal neither quotient nor remainder, and the answer of the season will be a product of blasted hopes. Judicious and timely feeding, both stimulative and otherwise, is a positive prerequisite to success, and he who is too lazy or stingy to supply this requirement had better not embark in the business. In short, the man or the woman who expects to realize all the possibilities of fortune in apiculture, must acquire an ardent love for the pursuit, by a faithful and student-like perusal of all the best books and papers devoted to the subject, and this should be supplemented by practical lessons among the bees, involving all the operations referred to in the previous lessons, and this under the eye and supervision of an experienced apiarist.

The intending bee-keeper must realize that he is entering on a pursuit which requires much hard labor, both physical and mental. That to secure the best results he must inwardly digest the fact that if a good workman requires good tools in order to do a well finished job, it is doubly true in regard to himself. That attempting to make his own bee-fixtures, and depending on his agricultural paper for instruction, is but poor economy, if indeed it deserves the name at all. That a month or more spent with a practical and therefore scientific bee-keeper in the busiest part of the season, would be of incalculable benefit to him, even though he pay for the privilege.

Apiarists as a class, are men of large hearts and genuine sympathies, and seldom refuse to advise beginners, if solicited in the proper spirit, but if approached by one who, upon a hasty reading of the "Blessed Bees," or some other fictitious production, has become suddenly wise in his own conceit, he is usually left to find out by a sad experience that a "little

knowledge is a dangerous thing," as well in bee-keeping as theology.

New York.

SELECTIONS FROM OUR LETTER BOX

The Hive for Beginners.—Would you advise beginners to use brood frames with close-end top bars instead of open top bars.

G. H. D.

[No; we offer no such advice. But few persons approve of such, and many object to them. We advise the use of one of the popular hives, with frames of ordinary size and regular shape. Nearly every beginner, during the first year, fancies he could invent a hive that would "beat the world," but, after more experience, finds one of the standard type of hives to be good enough for him. Beginners should be content to learn from experience of others—to follow and not expect to lead.—ED.]

How to make Paste or Glue with Flour.—Make a dough with water and flour, then dilute the dough with more water. Use about one tablespoonful of flour for one half glass of water, or a little more. Put on the oven in a tin stew pan, stirring constantly to prevent burning; as soon as it boils it is done. If the labels come off with this glue, they are made with paper too thick. If you want a glue which lasts without rotting, mix in the flour before wetting it, some powdered alum.

CHAS. DADANT.

Hamilton, Ill., Jan. 31, 1882.

Golden Honey Plant.—I have 8 colonies; some Italians, but mostly blacks; they had two flights in January, and seem to be in good condition. Snow fell last night about 7 inches deep, yet the weather seems warm; about 30 degrees. Some time since I sent Dr. G. L. Tinker, New Philadelphia, O., some seeds of the golden honey plant. The seed he sent back to me were larger than those I sent him, but are the same kind. I find for 2 miles up and down our creek a few stalks of the golden honey plant growing. I observed closely the working of the bees on different kinds of plants, but the golden honey plant seems to have more bees at work than any other. We have some 5 or 6 varieties of golden rod here, but no basswood.

E. M. COOMBS.

Memphis, Ind., Jan. 31, 1882.

Bees Doing Well.—In this locality, bees had a good flight on Jan. 27, and Feb. 6. I have 23 colonies; 15 packed on the summer stands; 6 being packed in boxes with chaff and 2 in chaff hives.

NORMAN V. GOODNOE.

North Lansing, Mich., Feb. 7, 1882.

Superseding Queens.—Permit me to ask: 1. Are there any bee-keepers who make a practice of replacing old queens with young ones, for fear the old ones will not live through winter?

2. If so, what disposition do they make of the old ones?

3. Would two years old be the right time to make the change?

4. Would not perforated zinc partitions for confining the queen to a limited portion of the hive, be good for controlling the bees till you wished to divide them? I am thinking of those bee-keepers who have only a few colonies and want to increase, and have not time to wait for natural swarms.

WALTER HARMER.

Manistee, Mich., Feb. 3, 1882.

[1. Yes; all successful bee-keepers make a practice of superseding old queens in the fall, or during summer when they have good young queens on hand.

2. The old queens are, or should be, destroyed.

3. As a rule, two years is the right age to supersede them, though some are good and prolific the third season.

4. We are not partial to the use of perforated zinc. If the bee-keeper cannot spare time to give his bees close attention, he should divide the colonies when they begin making preparations for swarming. If the frames are uniform, the division can be made about as quickly as the perforated zinc can be applied.—ED.]

Adhesive Paste.—The *American Cultivator* gives this recipe for such paste as is used on the backs of postage stamps: Dextrine, 2 ounces; acetic acid, 4 drachms; water, $2\frac{1}{2}$ ounces. Mix the dextrine, acetic acid and water, stirring until thoroughly mixed, and add alcohol. For attaching labels to tin, rub the surface with a mixture of muriatic acid and alcohol; apply the label with a thin coating of the paste.

J. W. WINDER.

Thibodeaux, La.

Bees are in Satisfactory Condition.—The indications this morning were good for a pleasant day, so I thought I would ride down to my apiary for the first time since October. I was taken sick in October, but I am now about as well as ever. I examined every colony, and can say that I have been keeping bees for 14 years and never had them to winter as well and on so little honey as they have this winter.

J. T. WILSON.

Mortonsville, Ky., Feb. 6, 1882.

A Query.—Will the JOURNAL please ask Dr. W. R. Howard to tell your thousands of appreciative readers, whether he thinks the Dzierzon theory necessarily follows from the establishment of the much-cherished idea of parthenogenesis?

W. H. ANDREWS.

McKinney, Tex., Feb. 2, 1882.

Maple and Sorghum Syrups.—Advise through the BEE JOURNAL: 1. Will it do to feed a good quality of maple syrup to bees in the last of February or first of March, when it is known to be pure, having made it myself? 2. Is sorghum fit to feed bees in April, when they can fly every few days? 3. When a person doubles up the bees in the spring, is it best to try and save the surplus queens, or destroy them?

R. P. WILLIAMS.

Goldsmith, Ind., Feb. 4, 1882.

[1. Maple syrup will answer when bees are getting occasional flights.

2. If bees are not confined to the hive for long periods, we do not know why a good, or even poor article of sorghum should be more detrimental to their health than fruit and cane juices and timber sap, all of which are more or less consumed by bees when the honey flow is light.

3. By all means destroy them. Most of the queens taken out are in some way defective, or the necessity would not exist for uniting the bees.—ED.]

Wintering Well.—Bees have wintered nicely so far; they have been flying lively for the last two days. I never saw bees in better condition than they are now; some are breeding. If the good weather continues there will be but little loss this winter. 1. I have 60 brood combs full of honey out of which I would like to take the honey. I have tried it with the extractor, but it breaks the combs. How can I get it out? 2. Will bees make any drone comb if supplied with worker foundation? I am well pleased with the BEE JOURNAL; I could not do without it so long as I keep bees.

H. J. SMITH.

Burlington, Wis., Feb. 8, 1882.

[1. Remove the combs with honey to a warm room, and let them get completely warmed through. This toughens the combs and thins the honey, and you will have no trouble in throwing it out while kept in that state.

2. To a great extent drone comb can be restricted by the use of worker foundation; but it is not a positive preventive.—ED.]

Cellar Wintering With Success.—I commenced the season of 1881 with 28 colonies, only one being a strong colony. They increased to 73; all but one had plenty of good honey to last them till May. They gathered 2,000 lbs. of extracted honey, and 200 lbs. of comb honey. My home market has taken the most of it. I have had no trouble in wintering in the cellar for the last 15 years, when they have had good honey enough to last them through. My cellar is not a dry one, and I have no ventilation, except when the doors are open. We keep our vegetables in the same room with the bees, and have to go down several times a day. FRANK SEARLES.

Marley, Ill., Feb 7, 1882.

Honey Granulation.—1. Will honey granulate if excluded from the air? I know of one case where extracted honey was put in a glass self-sealing can, and when opened the other day, after standing one year, was in the same condition as when sealed.

2. What causes my bees to be eaten in the hive, the bottom-boards of some hives being covered with the fragments of dead bees?

3. The bees in this vicinity are all blacks; I wish to introduce either the Italian or Cyprian bees next season—which would you advise, and how early can I purchase queens?

A. E. FISH.

North Hatley, Quebec, Feb. 2, 1882.

[1. Ordinarily, honey will granulate if chilled, even though excluded from the air.

2. The bees you suppose to have been eaten, are those which have decomposed from the action of moisture, leaving the harder portions, such as the part between the wings and the scales of the abdomen, dried up.

3. The relative merits of the Cyprians, as against the Italians, are not yet sufficiently demonstrated to warrant us in recommending their preference. Good queens can be obtained from northern and central breeders in June, and from the south in April and May.—ED.]

Buckwheat and Sweet Clover.—Will sweet clover do well, sown the last of June with buckwheat, and will it make a good crop of bloom the next year? Will it bloom the next year, if sown in the fall, after buckwheat is harvested? We have plenty of linden here yet, but timber is scarce and it is used very fast for fuel. Bee-keepers will have to plant to fill its place.

E. DORY,

Macksburg, Iowa, Feb. 1, 1882.

[We think it will do to sow sweet clover with buckwheat in June, and with satisfactory results in bloom, much more so than if sown in the fall when buckwheat is harvested.—ED.]

Wintering in Cellar.—Last Tuesday the thermometer registered 22° below zero. Bees are in excellent condition, the temperature in the cellar has not varied much since they were put in, while outside it has ranged from 60; above to 22° below zero. That is the right kind of a cellar to winter bees in. We expect that every colony will not only come out alive, but strong.

E. A. THOMAS.

Coleraine, Mass., Feb. 1, 1882.

Reversible Frame Hives.—I cannot do without the BEE JOURNAL; can hardly wait after I read one number, until the next arrives. The present size suits me 75 per cent. better than volume 17, because if bound, will make it handy to handle. My bees are in splendid condition. They have had, up to this, a fly once in 8 or 9 days.

If the weather continues as it has been so far, I expect to have strong colonies by May 1st, ready for work. In the JOURNAL, Vol. 18, No. 3, page 39, Mr. W. T. Stewart, of Eminence, Ky., mentions his reversible frame hive. I read it with interest and like the idea. Please give a description in detail in the BEE JOURNAL. Has he them for sale, or is it patented?

JOHN W. STURWOLD.

Haymond, Ind., Feb. 3, 1882.

Reversible Frames.—In the BEE JOURNAL of Jan. 18, 1882, I find an article by Mr. W. T. Stewart on the coming bee hive, and the advantages of a reversible frame. I am pleased to see the matter of reversible frames discussed. More than two years ago I became convinced a frame of that description would possess decided advantages over the ordinary frame, and after much thought on the subject invented metal corners for my frames which would admit of their being reversed at pleasure. A description of my metal corners was published in the BEE JOURNAL of March, 1881. I was not aware there was a reversible frame in use similar to my own, but inferred from the remarks of Dr. L. C. Whiting in the BEE JOURNAL, of Dec. 21, 1881, on the Van Deussen reversible frame, that it was similar. I have been awaiting a description from Mr. Van Deussen of his hive in response to the Doctor's call, and hope he will give a description of it in the BEE JOURNAL. As Mr. Stewart claims a reversible frame hive of his own invention which he thinks totally eclipses Mr. Van Deussen's, I think a description of it would also be appreciated by all advocates of the reversible frame hive.

W. B. ANDERSON, M. D.

Bloomington, Mich.

[We believe Mr. Stewart intends to patent it, and will, of course, have it for sale in due time.—ED.]

Every Colony Answered the Roll Call.—Yesterday we had a beautiful and warm day, and the bees had a good fly. Every one of my 147 colonies answered the roll call, and I am happy as a lark. I expect a lively time of it next season. The money I pay the BEE JOURNAL for advertising is, I think, well spent. It must have a large number of subscribers, for within one week after my advertisement first appeared in it, I received quite a number of orders, where the parties said: "as per advertisement in BEE JOURNAL." I. R. GOOD.

Nappanee, Ind., Feb. 9, 1882.

The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, Sec.

Christiansburg, Ky.

The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For 4 weeks.....	10 per cent. discount.
" 8 " (2 months).....	20 " "
" 13 " (3 months).....	30 " "
" 26 " (6 months).....	40 " "
" 39 " (9 months).....	50 " "
" 52 " (1 year).....	60 " "

Discount for 1 year, in the Monthly alone, 25 per cent., 6 months, 10 per cent.

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Transient Advertisements payable in advance.
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THOMAS G. NEWMAN,

974 West Madison Street., Chicago, Ill.

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

The **Apiary Register** devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 50
" 200 colonies (420 pages).....	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Articles for publication must be written on a separate piece of paper from items of business.

A **Sample Copy** of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

New Publications.

The *Oriental Casket*, is the title of a new literary monthly, of which we have received two numbers. It is elegantly printed on fine paper, and devoted to literature and science. It is published at \$2 a year, at 912 Arch st., Philadelphia, Pa., by L. Lum Smith, and edited by Emerson Bennett. Those who want a literary *gem* should send for the *Oriental Casket*.

The *British Bee-Keeper's Guide Book*, is the title of a manual of 136 pages, by Thos. Wm. Cowan, Esq., the Chairman of the British Bee-Keepers' Association. As the author of this little work is one of the most progressive among the English apiarists, of course it is a valuable and yet simple manual, and will do a vast amount of good in the way of disseminating light on rational bee-culture in Great Britain. We acknowledge the receipt of a copy of the second edition, sent to us "with the author's compliments." It is nicely printed and fully illustrated; all the newest American inventions are given a prominent place and thorough description and approval. Price 1s. 6d.

"Rational Apiculture;" the habits of the bees, fertilization of queens, etc. This is the title of a new work of 110 pages, translated from the Italian into French, by M. L. Gorlier, and published by the Apicultural Society of Somme, France. We are in receipt of a copy of the above mentioned work. It is a critical examination of the theory of parthenogenesis of bees, by L'Abbe Giotto Ulivi, of Tuscany, a province of Italy.

Mr. J. A. Everitt, Seedsman, of Watsonstown, Pa., met with a serious loss on the night of Jan. 25, by having his entire edition of catalogues, together with all the plates, electrotypes, etc., destroyed by fire. The catalogues were almost completed at the time. Mr. Everitt will have another edition ready soon, which is to be more elegant than any before published. Send for it.

We have received new Catalogues and Price Lists of Apiarian Supplies from

Dr. J. P. H. Brown, Augusta, Ga.
J. A. Hopkins, South Oxford, N. Y.
A. E. Manum, Bristol, Vt.
Dr. Nugent, Strathroy, Ont.

Elwanger & Barry's Catalogue of Fruit Trees, Shrubs, Roses, etc., is received, from Rochester, N. Y.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	Club.
The Weekly Bee Journal.....	\$2 00..	
and Gleanings in Bee-Culture (A. I. Root).....	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).....	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas).....	2 50..	2 35
The 4 above-named papers.....	4 50..	4 00
Bee-Keepers' Exchange (Houk & Peet).....	3 00..	2 60
Bee-Keepers' Guide (A. G. Hill).....	2 50..	2 35
Kansas Bee-Keeper.....	2 60..	2 40
The 7 above-named papers.....	6 30..	5 50
The Weekly Bee Journal one year and Prof. Cook's Manual (bound in cloth).....	3 25..	3 00
Bees and Honey, (T. G. Newman).....	2 40..	2 25
Binder for Weekly, 1881.....	2 85..	2 75
Binder for Weekly for 1882.....	2 75..	2 50

O. H. Townsend has moved from Hubbardston to Kalamazoo, Mich.—the latter now being his address.

We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

To any one sending two new Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our new subscribers will be pleased to learn that they can get it for \$1.00, by sending for it *at once*, before they are all gone.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or \$8 per 100.

When changing a postoffice address, mention the *old* as well as the new address.

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Feb. 13, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17¢@21¢; in larger boxes 2¢ less. Extracted, 8¢@10¢. BEESWAX—Prime quality, 18¢@22¢.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8¢@11¢ for extracted honey on arrival, and 16¢@18¢, for choice comb honey.
BEESWAX.—18¢@22¢, on arrival. I have paid 25¢ per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20¢@22¢; same in 2 to 3 lb. boxes, 17¢@20¢; dark and mixed, in 1 to 3 lb. boxes, 12¢@15¢. Extracted, white, 10¢@11¢; dark, 9¢.
R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Quiet; no change.
We quote white comb, 16¢@20¢; dark to good, 10¢@14¢. Extracted, choice to extra white, 8¢@10¢; dark and candled, 7¢@8¢. BEESWAX—23¢@25¢.
STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18¢@19¢; dark, in small boxes, 12¢@14¢. Extracted, white, 10¢@11¢; dark, 7¢@9¢.
BEESWAX.—Prime quality, 21¢@23¢.
THORN & CO., 11 and 13 Devos avenue.

ST. LOUIS.

HONEY—Quiet and slow for all save choice bright comb—this sold readily; comb at 18¢@23¢; strained and extracted 9¢@11¢, to 12¢@15¢—top rates for choice bright in prime packages.

BEESWAX—Steady at 20¢@21¢ for prime.
R. C. GREER & CO., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20¢@22¢, according to quality.
BEESWAX—Prime quality, 25¢.
CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market continues very steady; best white, in 1 and 2 lb. sections, sells quick on arrival at 21¢@22¢; No. 2 at 19¢@20¢, but buckwheat honey we find difficult to sell—holding it at 17¢. Extracted, is in fair demand at 12¢. In small packages, and 11¢. In large packages, 10¢.
BEESWAX—25¢, and very scarce.
A. C. KENDEL, 115 Ontario Street.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

- For a Club of 2,—a copy of "Bees and Honey."
" " 3,—an Emerson Binder for 1882.
" " 4,—Aplary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " 5,—" " cloth.
" " 6,—Weekly Bee Journal for 1 year, or Aplary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.



The Original YES, SIR; BINGHAM Bee Smoker

The only inventors ever elected Honorary Members of the North American Bee-Keepers' Society for their inventions were the Rev. L. L. Langstroth, movable comb hive; Frances Dunham, comb foundation; T. F. Bingham, bee smoker.

Patented, 1878. The North American Bee-Keepers' Society of 1881, and the Michigan State Bee-Keepers' Society of 1881, recommended only Bingham Smokers and Bingham & Hetherington Uncapping Knives.

Our patents cover all the smokers that burn sound stove-wood, or do not go out. If you buy our implements first you will have to buy no others.

PRICES:

	Handed to By Mail, Customer. Postpaid.	
Large Bingham Smoker (wide shield), 2½ inch.....	\$1 50	\$1 75
Extra Bingham Smoker (wide shield), 2 inch.....	1 25	1 50
Plain Bingham Smoker, 2 inch.....	1 00	1 25
Little Wonder Bingham Smoker, 1½ inch.....	75	65
Bingham & Hetherington Honey Knife, 2 inch.....	1 25	1 40

To sell again, apply for dozen or half-dozen rates. Address, T. F. BINGHAM, OF BINGHAM & HETHERINGTON, ABRONIA, Mich.

G. M. DOOLITTLE SAYS:

Stanley's Vandervort Foundation for sections is "even thinner than natural comb, and is the very best foundation made." See BEE JOURNAL of Jan. 3, and Gleanings for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send \$10 for 20 lbs. 10 sq. ft. per lb.

STANLEY'S VANDERVORT FOUNDATION.

We are making foundation for use in section boxes with very thin base and high, sharp, side-wall, for 2¢ per lb. less than thin foundation, 10 sq. feet per lb. Our wax is beautiful, and our foundation is just what you want. Send 3-cent stamp for samples of our three kinds of Vandervort foundation.

7wt G. W. STANLEY & BRO., Wyoming, N. Y.

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The KNOXVILLE TRIBUNE is a medium through which parties coming to Tennessee can obtain information of value in regard to climate, resources, productions, prices of land, and other points of interest to the stranger.

Inquiries about Tennessee answered by letter or through the paper, as requested. Address

THE TRIBUNE, Knoxville, Tenn.

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens; Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

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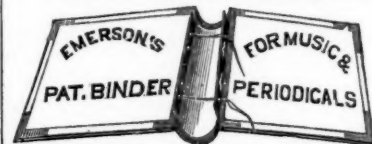
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Samples free on request.

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1-frame Nucleus, with Tested Queen.....\$4.50
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Full Colony, with Tested Queen, before July 1.....12.00
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Address, by Registered Letter or Postoffice Order,

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I have for sale about 300 Colonies of the

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which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

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high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition. 39wly L. C. AXTELL, Roseville, Warren Co., Ill.



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This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

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This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowledge of apianists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

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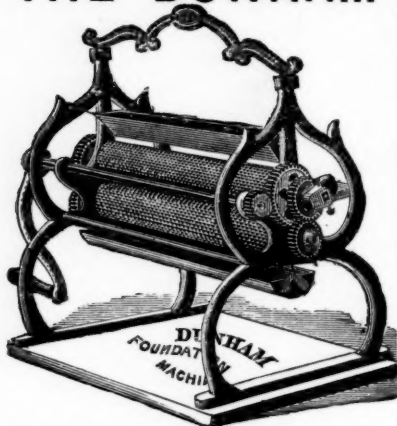
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100 Colonies of Italian Bees for Sale,

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1882.

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Extra Queens, for swarming season, ready, if we are timely notified.

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Novice's ABC of Bee-Culture, by A. I. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25; paper, \$1.

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